

Listing of the Claims:

Claims 1-10 Canceled.

11. (original) A database system for accessing a database in response to a SQL statement having an inclusion condition, said database system comprising:

a massively parallel processing system comprising:

one or more nodes;

a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs;

a plurality of virtual processes each of the one or more CPUs providing access to one or more virtual processes;

each virtual process configured to manage data stored in one of a plurality of data-storage facilities;

a parsing engine comprising:

a session control, which controls access to the plurality of virtual processes;

a parser, which interprets and optimizes a command for access to a database to produce a series of steps to be performed; and

a dispatcher, which controls the sequence of the series of steps and determines which of the plurality of virtual processes will perform each of the series of steps;

where the parser includes:

an optimizer which optimizes a plan for executing the series of steps;

where the optimizer includes:

- an inclusion hash join capability; and
- capability to recognize an inclusion merge join and replace with said inclusion hash join having an inner table and an outer table, wherein said inner table and said outer table are assigned as a left table and a right table, respectively, and said left table is hashed into a hash table and hash values from said right table are used to probe said hash table to determine if an inclusion condition is satisfied for a row of said right table and, if so, then evaluating a join condition and, if said evaluated indicates said inclusion condition is satisfied, then including said row of said right table in a result.

12. (original) A database system for accessing a database in response to a SQL statement having an exclusion condition with an inner and an outer table, said database system comprising:

a massively parallel processing system comprising:

one or more nodes;

a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs;

a plurality of virtual processes each of the one or more CPUs providing access to one or more virtual processes;

each virtual process configured to manage data stored in one of a plurality of data-storage facilities;

a parsing engine comprising:

a session control, which controls access to the plurality of virtual processes;

a parser, which interprets and optimizes a command for access to a database to produce a series of steps to be performed; and

a dispatcher, which controls the sequence of the series of steps and determines which of the plurality of virtual processes will perform each of the series of steps;

where the parser includes:

an optimizer which optimizes a plan for executing the series of steps;

where the optimizer includes:

an exclusion hash join capability; and

capability to recognize an exclusion merge join and replace with said exclusion hash join wherein said inner and outer tables are assigned to a left table and a right table, respectively, said left table is hashed into a hash table and a row of said right table is hashed

to obtain a hash value that used to probe said hash table to determine if said hash values match and, if no hash values match, then including said row of said right table in a result.